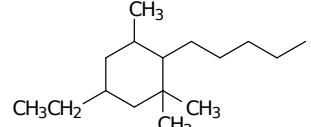


**Assignment 2: Naming & Drawing Alkanes Compound**

1. Name the below compound according to IUPAC Naming Method

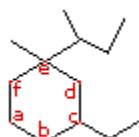
$\begin{array}{c} \text{CH}_3-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_3 \\   \qquad \qquad   \qquad \qquad   \qquad \qquad   \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}_2\text{CH}_3 \\   \\ \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}-\text{CH}-\text{CH}_3 \end{array}$	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2 \\   \\ \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}-\text{CH}-\text{CH}_2\text{CH}_3 \\   \qquad \qquad   \\ \text{CH}_2-\text{CH}_3 \end{array}$
$\begin{array}{c} \text{CH}_3 \qquad \text{CH}_3 \\   \qquad   \\ \text{CH}_3\text{CH}_2\text{C}-\text{CH}_2-\text{CH}-\text{CH}_3 \\   \qquad   \\ \text{CH}_2-\text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}_3 \qquad \text{CH}_3 \\   \qquad   \\ \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}-\text{CH}-\text{CH}_3 \\   \qquad   \\ \text{CH}_2 \qquad \text{CH}_3 \\   \qquad   \\ \text{CH}_2-\text{CH}-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\   \\ \text{CH}_3-\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2\text{CH}_2-\text{CH}_3 \\   \qquad   \\ \text{CH}_3 \qquad \text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}-\text{CH}-\text{CH}-\text{CH}_2 \\   \qquad   \qquad   \\ \text{CH}_3 \qquad \text{CH}_2 \qquad \text{CH}_3 \\   \qquad   \qquad   \\ \text{CH}_2 \qquad \text{CH}_2 \qquad \text{CH}_3 \end{array}$	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{CH}_2\text{CH}_2\text{CH}-\text{CH}_2\text{CH}_2\text{CH}_3 \end{array}$

2. Draw the below compound

a. 3-methyl-4-ethylheptane	b. 5,6-diethyldecane
c. 2-cyclobutyl-5-methylhexane	d. 4-isopropyl-2,6,6-trimethylnonane
e. 3,4-diethyl-4-methyloctane	f. 1-bromo-3-ethyl-5-methylcyclohexane

3. What is an isomer? Draw 4 of the isomer for C<sub>7</sub>H<sub>16</sub>

4. You are given a organic compound structure as below:



- In the IUPAC system, what is the root or base name of this compound?
- How many alkyl substituent are attached to the ring? Name the substituents.
- In numbering the ring, which carbon (a to f) is numbered #1?
- In the numbering the ring, which carbon (a to f) is numbered #2?
- Give the IUPAC name of this compound.

5. Write a balance equation for the complete combustion of heptane and undecane.